

U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICE

Atty. Docket No.

Serial No.

980721CIPCI

16/032051

INFORMATION DISCLOSURE
STATEMENT BY APPLICANTApplicant
Stephen G. Grubb, et al.

(Use several sheets if necessary)

Filing Date
December 21, 2001Group
3663J1046 U.S. PTO
10/032051
12/21/01

U. S. PATENT DOCUMENTS

EXAMINER 'S INITIALS	DOCUMENT NUMBER	ISSUE DATE	PATENTEE	CLAS S	SUB- CLASS	FILING DATE
<i>W</i>	4,315,666	Feb. 16, 1982	Hicks, Jr.			
	4,342,499	Aug. 03, 1982	Hicks, Jr.			
	4,401,364	Aug. 30, 1983	Mochizuki			
	4,616,898	Oct. 14, 1986	Hicks, Jr.			
	4,699,452	Oct. 13, 1987	Mollenauer, et al.			
	4,728,170	Mar. 01, 1988	Robertson			
	4,881,790	Nov. 21, 1989	Mollenauer			
	5,039,199	Aug. 13, 1991	Mollenauer, et al.			
	5,050,949	Sep. 24, 1991	DiGiovanni			
	5,083,874	Jan. 28, 1992	Aida, et al.			
	5,095,519	Mar. 10, 1992	Dorsey			
	5,191,586	Mar. 02, 1993	Huber			
	5,191,628	Mar. 02, 1993	Byron			
	5,228,105	Jul. 13, 1993	Glista			
	5,283,686	Feb. 01, 1994	Huber			
	5,406,411	Apr. 11, 1995	Button, et al.			
	5,500,756	Mar. 19, 1996	Tsushima, et al.			
	5,530,583	Jun. 25, 1996	Uno, et al.			
	5,541,766	Jul. 30, 1996	Mizrahi, et al.			
	5,557,442	Sep. 17, 1996	Huber			
	5,579,143	Nov. 26, 1996	Huber			
	5,633,974	May 27, 1997	Chia			
	5,636,301	Jun. 03, 1997	O'Sullivan, et al.			
	5,651,085	Jul. 22, 1997	Chia			
	5,675,432	Oct. 07, 1997	Kosaka			
	5,694,512	Dec. 02, 1997	Gonthier, et al.			
	5,696,615	Dec. 09, 1997	Alexander			
	5,717,510	Feb. 10, 1998	Ishikawa, et al.			
	5,764,406	Jun. 09, 1998	Newhouse, et al.			
<i>✓</i>	5,812,710	Sep. 22, 1998	Sugaya			

U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICE

Atty. Docket No.

Serial No.

980721CIPCI

10 / 032051

INFORMATION DISCLOSURE
STATEMENT BY APPLICANTApplicant
Stephen G. Grubb, et al.

(Use several sheets if necessary)

Filing Date
December 21, 2001Group
3663

U. S. PATENT DOCUMENTS

EXAMINER'S INITIALS	DOCUMENT NUMBER	ISSUE DATE	PATENTEE	CLAS S	SUB-CLASS	FILING DATE
W	5,815,710	Sep. 29, 1998	Bayart, et al.			
	5,861,981	Jan. 19, 1999	Jabr			
	5,880,866	Mar. 09, 1999	Stolen			
	5,883,736	Mar. 16, 1999	Oshima, et al.			
	5,900,969	May 04, 1999	Srivastava, et al.			
	5,903,371	May 11, 1999	Arecco, et al.			
	5,920,423	Jul. 06, 1999	Grubb, et al.			
	5,963,361	Oct. 05, 1999	Taylor, et al.			
	5,999,548	Dec. 07, 1999	Mori, et al.			
	6,031,646	Feb. 29, 2000	Sniadower			
	6,055,092	Apr. 25, 2000	Sugaya, et al.			
	6,057,959	May 02, 2000	Taylor, et al.			
	6,081,366	Jun. 27, 2000	Kidorf, et al.			
	6,122,298	Sep. 19, 2000	Kerfoot, III et al.			

FOREIGN PATENTS OR PUBLISHED FOREIGN PATENT APPLICATIONS

Examine r's Initial s	Document Number	Publication Date	Country or Patent Office	Clas s	Sub-Clas s	Transl Y N
W	07202306A	Aug. 04, 1995	JP			X - provide d by USPTO
W	EP 0 734 105 A2	Sep. 25, 1996	EPO			
W	EP 0853396 A2	Jul. 15, 1998	EPO			
W	WO 98/42088	Sep. 24, 1998	WIPO			

EXAMINE
R'S
INITIAL
SOTHER DOCUMENTS
(Including Author, Title, Date, Relevant Pages, Place of Publication)

Park, S.Y., et al., FEASIBILITY DEMONSTRATION OF 10 Gbit/s CHANNEL WDM NETWORK USING DYNAMIC GAIN-CONTROLLED EDFAs, Electronics Letters, 5th March 1998, Vol. 34, No. 5., Online No. 19980346

U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	Atty. Docket No.	Serial No.
	980721CIPCIP	10 / 032 051
	Applicant Stephen G. Grubb, et al.	
	Filing Date December 21, 2001	Group 3663

INFORMATION DISCLOSURE
STATEMENT BY APPLICANT

(Use several sheets if necessary)

EXAMINE R'S INITIAL S	OTHER DOCUMENTS (Including Author, Title, Date, Relevant Pages, Place of Publication)
u	Dung, J.C., et al., GAIN FLATTENING OF ERBIUM DOPED FIBRE AMPLIFIER USING FIBRE BRAGG GRATINGS, Electronics Letters, 19 th March 1998, Vol. 34, No. 6., Online No. 19980446
	Yu, A., et al., ANALYSIS OF OPTICAL GAIN AND NOISE SPECTRAL PROPERTIES OF ERBIUM-DOPED FIBER AMPLIFIER CASCADE, Optical Amplifiers and their Application, August 3-5, 1994, 1994 OSA Technical Digest Series, V14, pp. FB1-1-3/124-126.
	Masuda, H., et al., ULTRA-WIDEBAND OPTICAL AMPLIFICATION WITH A 3-dB BANDWIDTH OF 67 nm USING A PARTIALLY GAIN FLATTENED ERBIUM-DOPED FIBER AMPLIFIER AND RAMAN AMPLIFICATION, Optical Amplifiers and their Application, August 3-5, 1994, 1997 OSA Technical Digest Series, V20, pp. MC3-1-4/40-3.
	Sugaya, Y., et al., NOVEL CONFIGURATION FOR LOW-NOISE AND WIDE-DYNAMIC-RANGE Er-DOPED FIBER AMPLIFIERS FOR WDM SYSTEMS, Optical Amplifiers and their Application, June 15-17, 1995, 1995 OSA Technical Digest Series, V18, pp. FC3-1-4/158-161.
	Jacobovitz-Veselka, G.R., et al., SINGLE-STAGE BOOSTER AMPLIFIER WITH TWO 980 nm PUMPS STABILIZED BY FIBER GRATINGS, Optical Amplifiers and their Application, June 15-17, 1995, 1995 OSA Technical Digest Series, V18, pp. FC4-1-4/162-165
	Hansen, P.B., et al., LOSS COMPENSATION IN DISPERSION COMPENSATING FIBER MODULES BY RAMAN AMPLIFICATION, OFC'98 Technical Digest pp.20-1.
	Rottwitt, K., et al., DETAILED ANALYSIS OF RAMAN AMPLIFIERS FOR LONG-HAUL TRANSMISSION, OFC'98 Technical Digest pp.30-1.
	Chernikov, S.V., et al., 10 Gbit/s ERROR-FREE TRANSMISSION OF 2-ps PULSES OVER A 45-km SPAN USING DISTRIBUTED RAMAN AMPLIFICATION AT 1300 nm, OFC'98 Technical Digest p.31.
	Kawai, S., et al., ULTRAWIDE 75 nm 3-dB GAIN-BAND OPTICAL AMPLIFIER UTILIZING ERBIUM-DOPED FLUORIDE FIBER AND RAMAN FIBER, OFC'98 Technical Digest pp.32-3.
	Dianov, E.M., et al., HIGHLY EFFICIENT 1.3 μ m RAMAN AMPLIFIER, OFC'98 Technical Digest pp.33-4.
	Rottwitt, K., et al., A 92 nm BANDWIDTH RAMAN AMPLIFIER, OFC'98, Post-Deadline Paper PD6-1-4.
	Srivastava, A.K., et al., 1 Tb/s TRANSMISSION OF 100 WDM 10 Gb/s CHANNELS OVER 400 km OF TrueWave FIBER, OFC'98, Post-Deadline Paper PD10-1-4.
	Masuda, H., et al., ULTRA-WIDEBAND HYBRID AMPLIFIER COMPRISING DISTRIBUTED RAMAN AMPLIFIER AND ERBIUM-DOPED FIBER AMPLIFIER, Electronics Letters, 25 th June 1998, Vol. 34, No. 13, Online No. 19980935
	Takano, K., et al., AN OPTICAL PRE-AMPLIFIER WITH AUTOMATIC GAIN CONTROL FUNCTION, Proceedings of the 1995 IEICE General Conference, Mar. 27-30, 1995, Fukuoka, Fukuoka Institute of Technology b-1067, p. 513.
✓	Zou et al., Compensation of Raman Scattering and EDFA's Nonuniform Gain in Ultra-Long-Distance WDM Links, IEEE Photonics Technology Letters, Vol. 8, No. 1, January 1996, pp. 139-141

U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	Atty. Docket No.	Serial No.
	980721CIPCI	10/032051
	Applicant Stephen G. Grubb, et al.	
	Filing Date December 21, 2001	Group 3663

INFORMATION DISCLOSURE
STATEMENT BY APPLICANT

(Use several sheets if necessary)

EXAMINE R'S INITIAL S	OTHER DOCUMENTS (Including Author, Title, Date, Relevant Pages, Place of Publication)
W	Stentz, A., et al., OSA Trends in Optics and Photonics, Vol. 5, Optical Amplifiers and Their Applications. From the Topical Meeting, pp. 350-368, Published: Washington, DC, USA, 1996.
	Wen, Senfar, et al., IEEE Photonics Technology Letters, February 1992, Vol. 4, No. 2, New York, US, pp. 189-192, IEEE Log Number: 9105789.
	Aide, K., et al., Long-Span Repeaterless IM/DD Optical Transmission Experiment over 300 KM using Optical Amplifiers, ICC '91, Vol. 3, pages 1228-1232, 1991, Published: New York, NY, USA.
	Grubb, S. G., Raman Amplifiers for Broadband Communications, OFC '98, OSA Technical Digest Series Vol. 2, 1998, abstract
	Aide, et al., Long-Span Repeaterless IM/DD Optical Transmission, ICC '91, Vol. 3, pages
Examiner	<div> <div>NELSON MOSKOWITZ</div> <div>PRIMARY EXAMINER</div> </div>
Date Considered	
<p>EXAMINER: Initial citation considered. Draw line through citation if not in conformance and not considered.</p> <p>Include copy of this form with next communication to applicant.</p>	